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- (c) storing in an array said digitized replacement radio commercials, said associated time lengths, and said commercial types, said array being stored at an Internet service provider;
  - (d) maintaining user demographic information;
  - (e) marking each of said broadcast radio commercials with a digital marker by said radio station, said digital marker indicating the start and duration time of said broadcast radio commercial within said Internet radio program;
  - (f) transmitting said marked Internet radio program to said Internet hosting service;
  - (g) receiving of said marked Internet radio program by said Internet hosting service;
  - (h) examining of said marked Internet radio program by said Internet hosting service;
  - (i) detecting a digital marker of a commercial on said received Internet broadcast program;
  - (j) reading the duration time, of said commercial, from said detected digital marker;
  - (k) comparing said read duration time with said associated time lengths stored in said array;
  - (l) selecting from said array a digitized replacement radio commercial, said type of said replacement commercial matching said user demographic information and said replacement commercial having an associated time length equal to said read duration time;
  - (m) substituting said selected digitized replacement radio commercial in place of said broadcast commercial; and
  - (n) repeating steps (i) through (m) until the end of said Internet radio program,
- whereby the listener of said Internet radio program receives an edited program having one or more replacement radio commercials substituted in place of said broadcast radio commercials.

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## **CLAIMS**

**What is claimed is:**

1. A method for substituting replacement radio commercials in place of a plurality of broadcast radio commercials on an Internet radio program broadcast by a radio station to an Internet hosting service, comprising the steps of:
  - (a) generating a plurality of replacement radio commercials of various predetermined time lengths, whereby each replacement radio commercial has an associated time length;
  - (b) digitizing said replacement radio commercials and said associated time lengths;
  - (c) storing in an array said digitized replacement radio commercials and said associated time lengths, said array stored at an Internet service provider;
  - (d) marking each of said broadcast radio commercials with a digital marker by said radio station, said digital marker indicating the start and duration time of said broadcast radio commercial within said Internet radio program;
  - (e) transmitting said marked Internet radio program to said Internet hosting service;
  - (f) receiving of said marked Internet radio program by said Internet hosting service;
  - (g) examining of said marked Internet radio program by said Internet hosting service;
  - (h) detecting a digital marker of a commercial on said received Internet broadcast program;
  - (i) reading the duration time, of said commercial, from said detected digital marker;
  - (j) comparing said read duration time with said associated time lengths stored in said array;
  - (k) selecting from said array a digitized replacement radio commercial having an associated time length equal to said read duration time;
  - (l) substituting said selected digitized replacement radio commercial in place of said broadcast commercial; and

(m) repeating steps (h) through (l) until the end of said Internet radio program, whereby the listener of said Internet radio program receives an edited program having one or more replacement radio commercials substituted in place of said broadcast radio commercials.

2. A method as recited in claim 1 wherein said marking is performed by a radio station computer system, such as a broadcast automation system.

3. A method as recited in claim 2 wherein the audio stream of the radio station is digitized into packets bearing sequential serial numbers, and said marking of broadcast commercials by marking the start time and duration of the commercial identifies the audio packet serial numbers constituting the beginning and duration of the audio commercial to be replaced.

4. A method as recited in claim 1 wherein the Internet hosting service maintains commercial type information for targeting ads to consumers, and user demographic information, and matches said user demographics to said commercial type for selecting a commercial targeted to said user.

5. A method as recited in claim 2 wherein the Internet hosting service maintains commercial type information for targeting ads to consumers, and user demographic information, and matches said user demographics to said commercial type for selecting a commercial targeted to said user.

6. A method as recited in claim 3 wherein the Internet hosting service maintains commercial type information for targeting ads to consumers, and user demographic information, and matches said user demographics to said commercial type for selecting a commercial targeted to said user.

7. A system for substituting broadcast commercials of an Internet radio program, with replacement commercials, comprising:

- (a) radio station means for marking said broadcast commercials of said Internet radio program with a mark, said mark indicating the start and time duration of said broadcast commercial;
- (b) input server means for receiving said marked Internet radio program by an Internet hosting service;
- (c) commercial storage means of said Internet hosting service for storing a plurality of digitized radio commercials;
- (d) central processor means for selecting one of said digitized radio commercials from said commercial storage means;
- (e) marker decoder means for decoding said mark, said mark being supplied to said central processor;
- (f) central processor mixing means for generating an edited radio program by substituting said selected digitized radio commercial in place of said broadcast commercial; and
- (g) output server means for transmitting said edited radio program to a user.

8. A system as recited by claim 7 wherein said commercial storage means further stores commercial type.

9. A system as recited by claim 7 further comprising user profile storage means for storing individual user ID and user demographics, whereby said central processor employs said user ID to match said user demographics to said commercial type for selecting a commercial targeted to said user.

10. A method for substituting replacement radio commercials in place of a plurality of broadcast radio commercials on an Internet radio program broadcast by a radio station to an Internet hosting service, comprising the steps of:

- (a) generating a plurality of replacement radio commercials of various predetermined time lengths, whereby each replacement radio commercial has an associated time length and a commercial type;
- (b) digitizing said replacement radio commercials and said associated time lengths;
- (c) storing in an array said digitized replacement radio commercials, said associated time lengths, and said commercial types, said array being stored at an Internet service provider;
- (d) maintaining user demographic information;
- (d) marking each of said broadcast radio commercials with a digital marker by said radio station, said digital marker indicating the start and duration time of said broadcast radio commercial within said Internet radio program;
- (e) transmitting said marked Internet radio program to said Internet hosting service;
- (f) receiving of said marked Internet radio program by said Internet hosting service;
- (g) examining of said marked Internet radio program by said Internet hosting service;
- (h) detecting a digital marker of a commercial on said received Internet broadcast program;

(i) reading the duration time, of said commercial, from said detected digital marker;  
(j) ~~comparing~~ said read duration time with said associated time lengths stored in said array;  
(k) selecting from said array a digitized replacement radio commercial, said type of said replacement commercial matching said user demographic information and said replacement commercial having an associated time length equal to said read duration time;  
(l) substituting said selected digitized replacement radio commercial in place of said broadcast commercial; and  
(m) repeating steps (h) through (l) until the end of said Internet radio program, whereby the listener of said Internet radio program receives an edited program having one or more replacement radio commercials substituted in place of said broadcast radio commercials.

11. A method as recited in claim 10, wherein said marking is performed by a radio station computer system, such as a broadcast automation system.

12. A method as recited in claim 11, wherein the audio stream of the radio station is digitized into packets bearing sequential serial numbers, and said marking of broadcast commercials by marking the start time and duration of the commercial identifies the audio packet serial numbers constituting the beginning and duration of the audio commercial to be replaced.